UNITED STATES PATENT APPLICATION

FOR

BODY ATTACHED GOLF AIM ALIGNMENT DEVICE AND METHOD FOR USE

Inventor:
Matteo J. Rosselli

Prepared by:
Kenneth L. Sherman, Esq.
Sherman & Sherman, P.C.
Stephanie C. Alvarez, Esq.
Feldman, Gale & Weber, P.A.
(Of Counsel)
2029 Century Park East
17th Floor
Los Angeles, CA 90067
Telephone (310) 789-3200
Facsimile (310) 789-3210

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BODY ATTACHED GOLF AIM ALIGNMENT DEVICE ANE METHOD FOR USE

FIELD OF THE INVENTION

This present invention relates to a golf aid, and more particularly, to a device for improving a person's body and golf swing alignment for a stroke through a golf ball.

BACKGROUND OF THE INVENTION

Golfers continuously strive to lower their scores by increased practice time and by purchasing various accessories to give them advantageous results over competing players. One obvious way to affect a golf stroke is to properly control the club's direction and aim.

Alternatively, the present invention also recognizes that golf swing and body misalignment can have a major effect on a golfer's performance when driving or putting a golf ball. Following the swing, and once a golfer strokes through the golf ball and misses the target, a golfer has no way of knowing whether his body and golf swing were properly aligned or misaligned. Even if the golfer knew that his body was misaligned, he has no way of knowing what aspect of his stance or swing he needed to correct in order to achieve proper body or swing alignment.

Many golfers say that the key to aiming the ball directly to the target starts with the golfer's stance. As such, golfers have tried to test and check their golfer's stance through various techniques by reviewing their own body. One system is set forth in U.S. Patent No. 5,381,614 to *Goldstein* ('614 patent).

The '614 patent describes a pair of golf shoes which aid a golfer in establishing relative positioning of his or her feet with respect to the ball and with respect to each other so that an optimal stance may be obtained to improve the golfer's aim during driving and iron shots. The alignment means on the golf shoes includes a series of lines

which are lined up to each other to show proper foot placement. However, in the system described in the '614 patent, as in all other stance alignment systems, the points of reference which are used to check the proper stance and body alignment are on the body itself. For instance, in the system described in the '614 patent, the reference points consist of visual guide lines that are shown on the golfer's shoes. These alignment systems are quite limited because the golfer has a very narrow point of reference to work with (i.e. only the lateral distance from his body to his shoes). With such a limited point of reference, it is almost impossible to accurately change and calibrate alignment, stance and swing.

As discussed above, in addition to fixing their golf stance, golfers have attempted to improve their score and their aim by attaching guidance and aiming systems to the golf clubs themselves. This technique must be distinguished from training of the body and swing alignment, since it addresses only the club head direction and not the underlying technique of the user's swing and body alignment.

Previous attempts to provide a golf training device by incorporating laser guidance systems into the club itself are described in U.S. Patent No. 5,435,562 to *Stock et al.* ('562 patent); U.S. Patent No. 5,709,609 to *Carney* ('609); U.S. Patent No. 5,810,674 to *Falossi et al.* ('674 patent); and U.S. Patent No. 5,980,393 to *Molinaroli et al.* ('393 patent).

The '562 patent describes a golf club having a laser generating diode and a laser reflecting prism mounted in the golf club's hosel for emitting a laser beam perpendicular to the shaft of the club. The laser beam emitted from the hosel demonstrates the direction in which the club face is aligned.

The '609 patent describes a laser device that includes a laser housing having a bore in which a laser module is mounted such that the laser module emits a laser beam

through an opening in the bore coincident with the axis of the bore. The device is removably affixed to a putter.

The '674 patent describes a golf club laser positioning system comprising a golf club which has a pair of light emitters mounted within the head portion of the club and will permit the golfer to adjust the light beams depending on the distance desired and the angulation of the terrain. The laser positioning system allows the golfer to precisely select the correct angle and position of the head portion in relation to the desired path.

The '393 patent describes a golf club putter with a laser system for practicing putting.

In each of these golf club designs, a laser aiming device is attached to a golf club. None of the devices discussed above describe a golf laser alignment device that is attached to the golfer's body to provide a reference system for the golfer to control and train his stance and swing. For instance, the '393, '562 and '674 patents each describe a golf club with a laser device. Although the '609 patent describes a self-contained laser device, it is affixable only to a golf apparatus, i.e., the golf club.

Moreover, by using the devices described in the '393, '562, and '674 patents, the golfer is only able to correct the alignment of the club with the target as opposed to correcting his entire stance and/or body alignment with respect to the target. As such, none of the devices described above provide a golf laser device that may be used to correct or improve various aspects of a golfer's stance or body position, such as his feet, legs and back. Each of the prior devices only address how the golfer holds and aims his club.

Thus, there is a need in the art for a golf aid device that can be used to allow a golfer to pin point and correct particular elements contained in a golfer's stance, body alignment and aim prior to, during and after a swing.

There is also a need in the art for a golf aid device that is portable, lightweight and easy to use.

There is also a need in the art for a golf aid device that may be used in combination with another golf laser device for purposes of improving the golfer's all around body position.

There is yet even a further need to provide an external referencing system that provides a golfer with a pre-swing, during swing and after swing reference to help train body and swing alignment.

OBJECTS OF THE INVENTION

An object of the present invention is to provide a golfer with an easy to use golf laser device for achieving proper body alignment for driving a golf ball.

Another object of the present invention is to provide a golf laser device that is self contained and can be used in combination with other golf laser devices.

Yet still another object of the present invention is to provide a golf laser device that can be used to perfect a golfer's feet, leg or back position when swinging a golf club.

Yet still even a further object of the present invention is to provide an external referencing system that provides a golfer with a pre-swing, and during swing and post swing reference to help train body and swing alignment.

These, together with other objects of the present invention, along with the various features of novelty, which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure.

SUMMARY OF THE INVENTION

The above and other objects are achieved in the present invention by providing an interactive system and methodology for coordinating a golfer's aiming and control of his body and swing alignment with an external reference separated from his body. In the preferred embodiment of the present invention, a self contained, independent device may be removably affixed to the golfer's body at various points. The particular location of affixation corresponds to the area on his body the golfer wishes to focus on with respect to proper alignment, such as the golfer's feet, legs or back.

In the preferred golf laser alignment embodiment of the present invention, a housing with a laser system has a movable member affixed to the housing, the movable member has a fastening means for removably affixing the housing to a golfer at a location of the golfer's body, which location is selected for consideration for alignment. The housing emits a laser beam to provide the golfer with an external line of reference pointing directly to a target. This external referencing system allows the golfer to achieve proper body alignment with reference to the target.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects, advantages and features of the invention, and the manner in which the same are accomplished, will become more readily apparent upon consideration of the following detailed description of the present invention taken in conjunction with the accompanying drawings which illustrate preferred and exemplary embodiments, and wherein:

FIG. 1A is a side view of the golf laser alignment device of the preferred embodiment of the present invention, designated generally as 10 including a belt clip.

FIG. 1B is a back view of the golf laser alignment device of the preferred embodiment of the present invention including a belt clip.

FIG. 2A is a side view of the golf laser alignment device of the preferred embodiment of the present invention including a slot for a velcro strap.

FIG. 2B is a back view of the golf laser alignment device of the preferred embodiment of the present invention including a slot for a velcro strap.

FIG. 3 is a front view of the golf laser alignment device of the preferred embodiment of the present invention as attached to the left ankle of the golfer including a reference line to target T.

FIG. 4. is a top view of a mat M that may be used in conjunction with the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The following description is provided to enable any person skilled in the art to make and use the invention and sets forth the best modes presently contemplated by the inventors for carrying out this invention. Various modifications however, will remain readily apparent to those skilled in the art, since the generic principles of the present invention have been completely defined.

Turning now to the drawings, wherein FIGS. 1A and 2B show a golf laser alignment device, designated generally as 10, which includes a housing 20 with a laser system 30 and a movable member 40 affixed to the housing 20. The movable member 40 includes a fastening means 50 for removably affixing the device 10 to a golfer G, at a location on the golfer's body.

As shown in FIG. 4, the housing 20 emits a laser beam 32 for providing the golfer G with a line of reference pointing directly to the target T. By using and controlling where the laser beam 32 points, the golfer G is able to achieve proper body alignment in reference to the target T.

In the preferred embodiment of the present invention, the laser system 30 comprises elements that are well known in the laser generating art, for proper generation of a thin, highly directional and highly visible beam of light. For instance, the laser system 30 emits a laser beam 32 that is a thin beam of light and is in the visible spectrum of light. The preferred embodiment of the laser beam will be in the shape of an arrow, the pointing end facing the target. The sources of the laser can be any of those that are obvious to one or ordinary skill in the art.

In a preferred embodiment, the movable member 40 comprises a swiveling member 43 having a means to adjust 42 the swiveling member 43 from an unfixed to a fixed position. The means to adjust 42 the swiveling member 43 from an unfixed to a fixed position can be in the form of a screw, that when tightened, secures said swiveling member into a fixed position. The use of a screw provides the golfer with an easy structure in which to secure the device from an unfixed to a fixed position, or vice versa, once he has aligned the laser beam 32 with the target T. This will become more apparent in the ensuing discussion.

As shown in Figures 1A, 1B, 2A, and 2B, the fastening means 50 may include an adjustable velcro strap 52, a belt clip 54 or any other similar fastening means that is adjustable. The fastening means 50 is removably affixable to the device, which makes it interchangeable as well. As such, a user may interchange fastening means from a velcro strap 52 to a belt and vice versa, the fastening means which is used can be selected dependent upon the location to which the device 10 is to be attached. The fastening means 50 is removably affixable to the device by way of a slot 53 or loop hole that is located at one end of the movable member 40, such that the velcro strap can fit in the loop 53 and a belt clip can be attached to the movable member 40 via the slot 53. Other similar fastening means can also be employed with the preferred embodiment of the present invention.

As shown in FIG. 4, a mat M with a grid G should be used in conjunction with the device 10. Using a mat M with a grid G will provide the golfer with a simple way of

examining his stance in relation to the target T in order to properly align the laser beam 32, and thus, the golfer's stance.

The preferred embodiment of the present invention, as described above, provides a golfer with a point of reference that corresponds to various points of the golfer's body, such points corresponding to the area the golfer seeks to improve with respect to his body alignment.

While the preferred embodiment described above serves to provide a golfer with proper alignment towards a target T, use of the preferred embodiment of the present invention can also aid the golfer in assuring that he does not tilt or sway backward when swinging the golf club, which is an added cause of poor performance. Many times, a golfer may have a proper stance, but may lose the proper form when swinging the golf club because the golfer's back tends to tilt in a backward direction. Use of the preferred embodiment of the present invention can serve to correct that problem, or better yet, ensure that it does not happen.

For instance, the preferred embodiment of the present invention may be affixed to a location on a golfer's body, wherein the a laser beam is directed to a point directly on the ground below the golfer and in front of the golfer's feet. In this way, a point of reference is provided enabling the golfer to avoid swaying backward when swinging the golf club and the golfer will be able to keep his eye on the point of reference while swinging so that he may determine whether his body is tilting backwards during his swing. It may be beneficial for the golfer to use the mat M when employing the device 10 in this way, in order to aid the golfer to determine the direction the point of reference is moving.

It is very easy to use the device 10 of the preferred embodiment of the present invention. The golfer simply fastens the device 10 to a particular location on his body L,

such as his left ankle, by using the fastening means 50 provided with the device 10 (i.e. a Velcro strap).

Next, the golfer places the mat M with the grid G on the ground in front of him. Once the device 10 is securely fastened to the golfer's ankle, the golfer can step on the mat M and take his usual golf stance towards the target T where the golfer is aiming.

The golfer then activates the device 10 and a laser beam 32 is emitted. Using the movable member 40, the golfer can adjust the device 10 and the laser beam 32 to point directly to the target T.

Once the laser beam 32 is pointing directly to the target T, the golfer can secure the movable member M into its fixed position, thereby fixing the laser beam 32 so it is pointing directly to the target T. The golfer can then compare his stance to the properly aligned laser beam 32, as reflected on the grid G, and adjust his feet and body accordingly. Once the golfer has aligned his feet and body in accordance with the properly aligned laser beam 32, he is ready to swing through the golf ball.

An advantage of the preferred embodiment of the present invention is that the golfer can use the device 10 as an aid each time he is ready to take a swing. Repetition of the above process should lead the golfer to perfecting his body alignment in relation to the target T.

In accordance with the above, a preferred method for using the preferred embodiment of the present invention is disclosed for aiding a golfer to achieve proper body alignment with respect to a target T, as follows: A golfer's method for achieving proper body alignment when driving a golf ball by using a laser alignment device 10, said method comprising the steps of: (i) fastening the laser alignment device 10 to a location of a golfer's body, the device 10 facing a target T; (ii) placing a mat M with a grid 6 on the floor surrounding the golfer; (iii) stepping on the mat M so that the golfer can take his usual golf stance; (iv) activating the laser alignment device 10 so that the device 10 emits

a laser beam 32; (v) moving the device 10until the laser beam 32is pointing to the target T, the movement of device 10 being achieved by moving the golfer's body and once the laser beam 32 is pointing at the target T, placing the device 10 into a locked position; (vi) examining the golfer's stance in relation to the laser beam 32 as reflected in the grid 6 and adjusting the golfer's stance to correspond to the laser beam 32; and (vii) driving the golf ball once the golfer's stance is aligned with the laser beam 32.

Moreover, another advantage of the preferred embodiment of the present invention is that a golfer can use one or more golf laser devices 10 simultaneously. By attaching the device 10 to various points of his body, a golfer can improve his specific body alignment with respect to where a device 10 is attached. For instance, the golfer can use the device 10 on his left ankle and upper left leg, thus providing himself with two laser beams 32 that are directed towards the target T and that serve as a guide to achieving proper alignment of his feet and legs with respect to the target T. In this case, once the emitted laser beams 32 point in the same direction (and are parallel to each other in direction) towards the target, the golfer's body alignment should be uniform with the target. It is envisioned that multiple laser beams 32 having different colors or frequencies can be used so that the devices 10, and in turn the specific body parts can be easily alienated from each other.

Accordingly, another method is disclosed for aiding a golfer to achieve proper body alignment with respect to a target T. A golfer's method for achieving proper body alignment when driving a golf ball by using at least one laser alignment device 10, the method comprising the steps of: (i) fastening a first laser alignment device 10 to a first location of a golfer's body, the first device 10 to be facing a target T; (ii) fastening a second first laser alignment device 10 to a second location of a golfer's body, the second device to be facing the target T; (iii) placing a mat M with a grid G on the floor surrounding the golfer; (iv) stepping on the mat M so that the golfer can take his usual golf stance; (v) activating the first and second laser alignment devices 10 so that the devices emit a first and second laser beam 32; (vi) moving the first and second devices 10 until the first and second laser beams 32 are pointing to the target T, the movement of

the first and second devices 10 being achieved by moving the golfer's body and once the first and second laser beams 32 are pointing at the target T, placing the first and second devices 10 into a locked position; (vii) examining the golfer's stance in relation to the first and second laser beams 32 as reflected in the grid G and adjusting the golfer's stance to correspond to the first and second laser beams 32; and (viii) driving the golf ball once the golfer's stance is aligned with the first and second laser beams 32.

Further embodiments of the present invention are also envisioned. For example, it is envisioned that the laser alignment device discussed above can be included directly into the golfer's clothes so that the proper placement on the golfer's body is ensured. Furthermore, other forces such as magnetics or sound may be used within the scope of the presently claimed invention which allow a golfer to interactively coordinate his swing and stance with an external reference system. Additionally, the preferred embodiment of the present invention can be modified to provide an automated sound or light signal to describe when the point of reference is in or out of alignment.

Accordingly, it will be understood that the preferred embodiment of the present invention has been disclosed by way of example and that other modifications and alterations may occur to those skilled in the art without departing from the scope and spirit of the appended claims.

Those skilled in the art will appreciate the various adaptations and modifications of the just described preferred embodiments can be configured without departing from the scope and spirit of the invention. Therefore, it is to be understood that, within the scope of the appended claims, the invention may be practiced other than as specifically described herein.